PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 904260	FOR FURTHER ACTION	See Form PCT/IPEA/416						
International application No. PCT/JP2004/010297	International filing date (day/month 20.07.2004	/year) Priority date (day/month/year) 23.07.2003						
International Patent Classification (IPC) or national classification and IPC F25D19/00 , F25B9/00, 9/14, F25D11/00, F28D15/02								
Applicant SHARP KABUSHIKI KAISHA								
 This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 								
2. This REPORT consists of a total of	5 shee	ts, including this cover sheet.						
 This report is also accompanied by Al 	NNEXES, comprising:							
a. (sent to the applicant and	to the International Bureau) a total c	of 8 sheets, as follows:						
sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).								
sheets which supers the disclosure in the Box.	sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental							
b. (sent to the International								
		, containing a sequence listing and/or tables						
related thereto, in computer Section 802 of the Administ		the Supplemental Box Relating to Sequence Listing (see						
This report contains indications relati	ng to the following items:							
Box No. I Basis of the								
Box No. II Priority								
Box No. III Non-establi	shment of opinion with regard to no	velty, inventive step and industrial applicability						
Box No. IV Lack of uni	ty of invention							
	Description of the state of the							
Box No. VI Certain doc								
Box No. VII Certain defo	ects in the international application							
Box No. VIII Certain obs	Box No. VIII Certain observations on the international application							
Date of submission of the demand	Date of com	pletion of this report						
Name and mailing address of the IPEA/JP	Authorized of	officer						
Facsimile No.	Telephone N	To						

Translation

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2004/010297

Box	No. I	Basis of the report		_	
1.		regard to the language, this report is based on the internation ated under this item.	nal application in the language in whi	ich it was filed, unless otherwise	
		This report is based on translations from the original langua which is the language of a translation furnished for the purp international search (Rule 12.3 and 23.1(b)) publication of the international application (Rule 12.4 international preliminary examination (Rule 55.2 and/	oses of: () (or 55.3)	·	
2.	recei	regard to the elements of the international application, this ving Office in response to an invitation under Article 14 are report): the international application as originally filed/furnished the description:			
		pages 2, 6, 8-26		as originally filed/furnished	
		pages* 1,3-5,7	received by this Authority on2	0.05.2005	
		pages*	received by this Authority on		
	\boxtimes	the claims:			
		nos. 2-5,7-10,12-15		as originally filed/furnished	
		nos.*	as amended (together w	ith any statement) under Article 19	
ŧ		nos.* 1,6,11			
		nos.*			
	\boxtimes	the drawings:	· _		
		sheets Fig. 1-21		as originally filed/furnished	
		sheets*			
		sheets*			
	\Box				
1		a sequence listing and/or any related table(s) - see Supplem	ental Box Relating to Sequence Listi	ng.	
3.		The amendments have resulted in the cancellation of:			
		the description, pages			
		the claims, nos. 16-24			
		the drawings, sheets/figs			
		the sequence listing (specify):			
		any table(s) related to sequence listing (specify):			
4.		This report has been established as if (some of) the amend they have been considered to go beyond the disclosure as fi			
		the description, pages			
		the claims, nos.			
		the drawings, sheets/figs			
		the sequence listing (specify):			
	any table(s) related to sequence listing (specify):				
*	If ite	m 4 applies, some or all of those sheets may be marked "sup	erseded."		

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2004/010297

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement				
1.	Statement			
	Novelty (N)	Claims	1-15	YES
		Claims		NO
	Inventive step (IS)	Claims		YES
		Claims	1-15	NO
	Industrial applicability (IA)	Claims	1-15	YES
		Claims		ио
<u> </u>				

- 2. Citations and explanations (Rule 70.7)
 - Document 1: JP 62-99097 A (Fujikura Ltd.), 25 March 1987; page 5, upper right column, line 3 to lower left column, line 9; fig. 5
 - Document 2: WO 02/16836 Al (Sharp Corp.), 28 February 2002; page 11, line 15 to page 13, line 26, fig. 5
 - Document 3: JP 6-185245 A (Mitsubishi Electric Corp.), 5 July 1994; paragraph [0057]-[0058] and fig. 4-5
 - Document 4: Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 186429/1985 (Laid-open No. 93574/1987) (Fujikura Ltd.), 15 June 1987; page 3, line 15 to page 4, line 18, and fig. 1-2

The inventions set forth in claims 1, 2 and 4 do not involve an inventive step in the light of document 3 and document 1, cited in the international search report. A person skilled in the art could easily apply a pipe structure disclosed in document 1 in a device disclosed in document 3; and making the pipe diameter larger on the gas side is an option available at the discretion of a

PCT/JP2004/010297

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

person skilled in the art.

The inventions set forth in claims 3 and 5 do not involve an inventive step in the light of document 3 and document 1, and document 2, cited in the international search report. A person skilled in the art could easily apply a device disclosed in document 3 and a pipe structure disclosed in document 1 in a cooling system for a refrigerator disclosed in document 2.

The inventions set forth in claims 6, 7 and 9 do not involve an inventive step in the light of document 3 and document 1, and document 4, cited in the international search report. A person skilled in the art could easily apply a heat extractor structure disclosed in document 4 in a device disclosed in document 3.

The inventions set forth in claims 8 and 10 do not involve an inventive step in the light of documents 1-4. A person skilled in the art could easily apply a device disclosed in document 3, a pipe structure disclosed in document 1 and a heat extractor disclosed in document 4 in a cooling system for a refrigerator disclosed in document 2.

The inventions set forth in claims 11, 12 and 14 do not involve an inventive step in the light of document 3 and document 1, and document 4, cited in the international search report. A person skilled in the art could easily apply a heat extractor structure disclosed in document 4 in a device disclosed in document 3, and connect split evaporators.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2004/010297

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

The inventions set forth in claims 13 and 15 do not involve an inventive step in the light of documents 1-4. A person skilled in the art could easily apply a device disclosed in document 3, a pipe structure disclosed in document 1 and a heat extractor structure disclosed in document 4 in a cooling system for a refrigerator disclosed in document 2.